

Q1: Choose the correct answer from the following:

(20 Marks)

- ✓ 1. The Cache memory is made of:
 - a. DRAM
 - ☒ b. SRAM
 - xx ☒ c. SDRAM
 - d. RDRAM
2. Where is the L1 cache located in a Pentium system?
 - ☒ a. On the motherboard
 - b. In the Pentium core
 - c. On the microprocessor PCB
 - d. In the RAM
3. A ZIF socket on the motherboard has 'Socket 775' name, what does the '755' refers to ?
 - a. The CPU internal speed.
 - ☒ b. The number of processor pins.
 - c. Socket size in mm.
 - d. The CPU caches total size.
- ✓ 4. Which technique is used to make the microprocessor cycles run faster than the system?
 - a. Dual core.
 - ☒ b. Multiplier.
 - c. EDB extension.
 - d. Internal cache extension.
- ✓ 5. What is the primary reason behind that DDR2 RAM is faster than DDR RAM?
 - a. DDR RAM is single-channel and DDR2 RAM is dual-channel.
 - ☒ b. The input/output speed of the ram is faster.
 - c. DDR RAM uses 184-pin DIMMs and DDR2 uses 240-pin DIMMs.
 - d. The core speed of the RAM chips is faster.
- ✓ 6. What method is used to correct single bit errors in RAM?
 - a. Refreshing
 - ☒ b. ECC
 - c. Latency
 - d. Parity

- 5
7. What is the DDR speed rating in a system with 133 MHz core speed?
- a. 100.
 - ☒ b. 133.
 - c. 266.
 - d. 300.
8. RDRAM employed:
- ☒ a. Single-channel architecture
 - b. Triple-channel architecture
 - ☒ c. A dual-channel architecture
 - d. None of the above
9. A man has a motherboard with four RAM slots that doesn't seem to work. He has two RDRAMs RIMMs installed, for a total of 1 GB of memory, but the system won't boot. What is likely to be the problem?
- a. The motherboard requires all four slots filled with RDRAM.
 - b. The motherboard requires SDRAM, not RDRAM.
 - ☒ c. The motherboard requires that the two empty slots filled with CRIMMs for termination.
 - d. The motherboard requires DDR SDRAM, not RDRAM.
10. Which of the following do the job of the MCC?
- a. Southbridge
 - ☒ b. BIOS
 - c. Northbridge
 - d. CMOS
11. Which of the following is hot swappable:
- a. Mini-Din
 - b. Firewire and Din
 - ☒ c. USB and Firewire
 - d. USB and Din
12. External modem connected through:
- a. USB B and 15 DB
 - b. HDMI and 9 male D
 - ☒ c. Male 9 and 25 D connectors
 - d. SDIF
13. What is the best way to determine the total capacity and specific type of RAM your system can handle?
- a. Check the system utility in the Control Panel.
 - b. Check the Device Manager.
 - ☒ c. Check the motherboard book.
 - d. Open the case and inspect the RAM
- 4.5 + 0.5

→ 14. A 10 bit address bus can address: $2^{10} =$

- a. 1 MB of RAM.
- b. 1 GB of RAM.
- c. 2 KB of RAM
- ☒ d. 1KB of RAM.

✓ 15. How many memory sticks of 30 pin SIMMs are required to fill a memory bank in an 80286 motherboard? 8-bit

- a. 1
- b. 3
- c. 4
- ☒ d. 2

16. How many memory sticks of 72 pin SIMMs are required to fill a memory bank in 80386 motherboard? 16-bit

- ~~xxx~~ ☒ a. 1
- b. 3
- c. 4
- ~~iii~~ ☒ d. 2

✓ 17. How many memory sticks of 168 pin DIMMs are required to fill a memory bank in an 80486 motherboard? 32-bit

- a. 2
- b. 3
- c. 4
- ☒ d. 1

✓ 18. Which of the following makes P6 more powerful than the predecessor?

- a. Quad pipelining
- b. Dynamic processing
- c. On-chip L2 cache
- ☒ d. All the above

✓ 19. Which of the following features are included in Pentium-Pro processor?

- ☒ a. on-chip L2 cache
- ☒ b. quad pipelining
- c. multimedia extensions (MMX)
- d. improved processing

✓ 20. Which of the following is used to connect a monitor to the PC:

- a. USB.
- b. DB-9 connector.
- ☒ c. VGA.
- d. Mini-DIN connector.

Q2) Fill in the blank:

(10 marks)

✓ 1. MMX was designed to work with large graphics by calculating on large chunks of data and performing vector math.

✓ 2. The external data bus provides channel for the flow of data and commands between the CPU and RAM.

✓ 3. Unused pairs of RIMM slots needed a passive device called CRIMMs installed in each slot to enable the RDRAM system to terminate properly.

✓ 4. The AGP enables the CPU to communicate with the chipset

✓ 5. Anti-static and Anti-static-bag are tools used to avoid ESD
Wrist-strap

✓ 6. The type of USB connector that is used for small devices such as cameras is Mini-B

7. A 25-pin DB connector can be used to connect a joystick.

✓ 8. The most common makes of CPUs used in PCs are Intel and AMD

Q3) In the following questions, tick [T] for true sentences, and [F] for false sentences, and correct the false sentences by replacing or adding a maximum of two words: (10 marks)

- ✓ 1. The term Plug describes either a port or a plug. [F]
connectors
- ✓ 2. The 8088 processor had a 16 bit address bus. [F]
data bus
3. The most common type of sound connector in popular use is the mini-audio connector. [F]
audio jack
4. The MOLEX connector is used to connect a PC power supply to a 3.5" Floppy drive. [F]
3.5 inch
- ✓ 5. Pentium II is the first processor that comes with L2 cache on the CPU. [F]
Pentium Pro
- ✓ 6. The 8088 processor had a 16 bit address bus. [F]
8 bit or has 20 bit address bus
- ✓ 7. Pentium 4 is the first 64 bit processor. [F]
intel Itanium
8. The Intel core is built using 65 um technologies. [T]
- ✓ 9. VRM stands for Voltage Repeater Module. [F]
regulator
10. Intel Pentium III is a 64 bit processor [F]
32-bit

Q4) What are the following terms stand for? (10 marks)

1. PGA: Pin grid array
2. DIMMs: dual inline memory modules
3. RIMMs: Rambus inline memory modules
4. FPM RAM : Fast page mode random access memory
- 5. ESD: Electric static discharge
6. SDRAM: synchronous dynamic random access memory
7. MCC: Memory control memory
8. SODIMM: small outline dual inline memory module
9. EDO RAM: Extended data out random access memory
10. SIPPs: Single inline Pin Packages

Q5) Briefly answer the following questions: (10 marks)

1. List two differences between SRAM and DRAM:

- SRAM is more expensive and has more speed than DRAM
- SRAM don't need refreshing but DRAM need refreshing

2. List two 8-bit processors:

- 8088 ✓
- 80186 ✗

3. List two 16-bit processors:

- 80286 ✓
- 8086 ✓

4. List two 32-bit processors:

- Pentium I ✓
- Pentium II ✓

5. List two 64-bit processors:

- Intel i5 core ✓
- Intel i7 core ✓

6. List two RJ connectors:

- RJ-11 ✓
- RJ-45 ✓

7. List two processors with L1 cache:

- AMD K5 ✓
- Pentium pro

8. List two processors with L2 cache:

- Pentium pro (early Pentium 4)
- Intel Itanium

9. List two DIMMs sticks:

- 168-DIMM
- 232-DIMM

10. List two Laptop memory sticks:

- SODIMM,
- SO DIMM,

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